CLAIMS

What is claimed is:

[c1]   1.   A computer-implemented method for using predefined parsing information to analyze web site navigation data in order to identify occurrences of defined types of events, the method comprising:

for each of multiple distinct web sites each having multiple web pages,

receiving web site navigation data associated with the web site that has multiple entries each containing information related to an occurrence of a request for a web page of the web site and of a response from a web site server for the web site;

retrieving predefined parsing information associated with the web site that includes multiple distinct definitions of logical sites and multiple distinct definitions of event types, each of the logical site definitions specifying an IP address and port number used by a web site server to provide at least some of the web pages of the web site, each of the event type definitions specifying a type of request for a web page of the web site and specifying one of the logical sites;

for each entry of the received web site navigation data,

analyzing the information contained in the entry to determine if the web site server that performed the related response matches any of the defined logical sites by having used the IP address and the port number specified by that logical site; and

if a logical site is determined to match the web site server, further analyzing the information contained in the entry by, for each of the event types whose definition specifies the matching logical site, when the information contained in the entry indicates that the related request is of the type specified by the event type, storing an indication of an occurrence for the web site of a request

of the type specified by that event type such that the stored indication includes information from the entry;

receiving a request from an operator of the web site to provide information for the web site about occurrences of specified event types;

retrieving in response the stored indications of occurrences related to the specified event types for the web site; and

providing the retrieved information to the operator,

so that the operators of the multiple web sites can receive information about occurrences of interest for their web sites.

[c2]   2.   The method of claim 1 wherein the information contained in each of the web site navigation data entries includes a URL path from the related request and at least some of the entries include a query string from that request, wherein the specification of a type of request for each of the event type definitions includes a URL pattern capable of matching URL paths of multiple web pages that are related to that type of request and includes a query string pattern capable of matching at least one query string related to that type of request, and wherein a related request for an entry is determined to be of the type specified by an event type when the URL path for that request and any query string for that request match the URL pattern and the query string pattern included in the definition of the event type.

[c3]   3.   The method of claim 2 wherein the query string patterns each include at least one query string parameter name, and wherein the information from an entry that is included with the stored indication of an occurrence of an event type includes a value from the related request query string for each query string parameter name in the query string pattern for the event type.

[c4]   4.   The method of claim 2 wherein at least some of the event type definitions include multiple event definition patterns that each include a URL

pattern and a query string pattern, and wherein a related request is determined to be of the type specified by an event type when the URL path for that request and any query string for that request match the URL pattern and the query string pattern of any of the event definition patterns of the event type.

[c5]   5.   The method of claim 1 wherein the receiving of the web site navigation data associated with a web site includes retrieving at least one log file from at least one web site server for the web site, the retrieved log files containing the web site navigation data.

[c6]   6.   The method of claim 1 wherein the predefined parsing information associated with one of the web sites further includes at least one exclusion definition specifying a type of request or response, and wherein the analyzing of the information contained in an entry of the web site navigation data associated with that web site is not performed if the related request or response for the entry is of a type that matches one of the exclusion definitions.

[c7]   7.   The method of claim 1 including, before the receiving of the web site navigation data for a web site, generating the parsing information associated with the web site based at least in part on the web site servers that can provide web pages of the web site and on types of requests for web pages that those web site servers can receive.

[c8]   8.   The method of claim 1 wherein the received request from an operator of one of the web sites further specifies effective dates such that the information to be provided is for occurrences of the specified event types that took place during the effective dates, and wherein the stored indications that are retrieved in response are for those occurrences.

[c9]   9.   The method of claim 1 wherein the operator of one of the web sites from whom a request is received is at a remote location, and wherein the providing of the retrieved information to the operator includes generating a report that includes the retrieved information and sending the generated report to the remote location for presentation to the operator.

[c10]   10.   The method of claim 1 wherein the operators of the multiple web sites are customers, and wherein the analyzing of the web site navigation data entries for the web sites is performed as a service for the customers.

[c11]   11.   A computer-implemented method for analyzing interaction data to identify occurrences of defined types of events, the method comprising:

receiving an indication of interaction data that is associated with a content set and that has at least one entry, each entry related to an interaction with the content set;

receiving an indication of at least one communication definition that specifies a manner of communicating content set interactions;

receiving an indication of multiple event type definitions each specifying a type of interaction with the content set and each associated with one of the communication definitions; and

for each entry of the interaction data,

determining whether the entry matches one of the event type definitions in such a manner that the related interaction for the entry is of the type specified by that event type definition and was communicated in the manner specified by the communication definition associated with that event type definition; and

when it is determined that the entry matches one of the event type definitions, storing an indication of an occurrence of that event type.

[c12]   12.   The method of claim 11 wherein the content set is a web site with multiple web pages.

[c13]   13.   The method of claim 11 wherein the content set is a group of multiple related web pages that are a subset of web pages of a web site.

[c14]   14.   The method of claim 11 wherein the content set is multiple related web sites each having multiple web pages.

[c15]   15.   The method of claim 11 wherein the content set is a group of related items.

[c16]   16.   The method of claim 11 wherein the content set is a service providing multiple features.

[c17]   17.   The method of claim 11 wherein the content set is an executing program providing various functionalities.

[c18]   18.   The method of claim 11 wherein each of the interactions related to the interaction data entries includes specifying a Uniform Resource Indicator.

[c19]   19.   The method of claim 11 wherein each of the interactions related to the interaction data entries includes requesting that functionality be provided.

[c20]   20.   The method of claim 11 wherein each of the interactions related to the interaction data entries includes supplying information.

[c21]   21.   The method of claim 11 wherein the manner of communicating content set interactions specified by each of the communication definitions

includes using a specified IP address and port number to communicate information related to an interaction.

[c22]　　　22.　The method of claim 11 wherein the manner of communicating content set interactions specified by each of the communication definitions includes using a specified domain name to communicate information related to an interaction.

[c23]　　　23.　The method of claim 11 wherein the manner of communicating content set interactions specified by each of the communication definitions includes using a specified group of communication parameters to communicate information related to an interaction.

[c24]　　　24.　The method of claim 11 wherein the manner of communicating content set interactions specified by each of the communication definitions includes identifying a specified portion of the content set to which an interaction is to be communicated.

[c25]　　　25.　The method of claim 11 wherein the manner of communicating content set interactions specified by each of the communication definitions includes identifying a specified computing device or computer program provider to which an interaction is to be communicated.

[c26]　　　26.　The method of claim 11 wherein each of the interactions related to the interaction data entries includes specifying a Uniform Resource Indicator, and wherein the type of interaction specified by each of the event type definitions includes a pattern capable of matching at least one Uniform Resource Indicator.

[c27]　　　27.　The method of claim 11 wherein each of the interactions related to the interaction data entries includes specifying a URL having a path portion and a

query string portion, each of the query string portions including one or more combinations each having a query parameter name and corresponding query value, and wherein the type of interaction specified by each of the event type definitions includes a URL path pattern capable of matching one or more URL paths and includes a query string pattern capable of matching at least one query string.

[c28]   28.   The method of claim 27 wherein the query string patterns each indicate one or more query parameter names whose presence in a query string is required, allowed, or disallowed if that query string is to match the query string pattern, and wherein the determination of whether a query string portion matches a query string pattern includes determining if the query string portion includes each of the query parameter names whose presence is indicated in the query string pattern to be required and does not include any of the query parameter names whose presence is indicated in the query string pattern to be disallowed.

[c29]   29.   The method of claim 27 wherein the query string patterns each include at least one query string parameter name, and wherein the stored indication of an occurrence of an event type when an entry matches the definition for that event type includes, for each query string parameter name in the query string pattern for that event type definition, a value from the query string portion of the specified URL for that entry that corresponds to that query string parameter name.

[c30]   30.   The method of claim 29 wherein at least one of the query string patterns includes multiple instances of a query string parameter name, and including, when an entry matches the definition for the event type that includes that one query string pattern in such a manner that the query string portion of the specified URL for that entry includes multiple combinations that each have a query string value corresponding to one of the instances of the query string

parameter name, before the storing of those query string values, determining a unique name for each of the multiple instances of the query string parameter name so that those corresponding query string values for each of the multiple instances of the query string parameter name can be stored distinctly from the corresponding query string values for the other instances of the query string parameter name.

[c31]   31.   The method of claim 27 wherein at least some of the event type definitions include multiple event definition patterns that each include a URL path pattern and a query string pattern, and wherein the related interaction for an entry is determined to be of the type specified by an event type definition when the path portion and the query string portion of the URL for that entry match the URL path pattern and the query string pattern of any of the event definition patterns of that event type.

[c32]   32.   The method of claim 27 wherein at least some of the URL path patterns include a static portion capable of matching a single corresponding portion of a URL path and include a variable portion capable of matching multiple corresponding portions of URL paths.

[c33]   33.   The method of claim 27 wherein each of the URL path patterns can be specified to match any URL path and wherein each of the query string patterns can be specified to match any query string.

[c34]   34.   The method of claim 11 wherein each of the communication definitions can be specified to match any manner of communicating content set interactions.

[c35]   35.   The method of claim 11 wherein each of the event type definitions can be specified to match any type of interaction with the content set.

[c36]   36.   The method of claim 11 wherein at least some of the entries are determined to match multiple of the event type definitions.

[c37]   37.   The method of claim 11 wherein each of the entries contain information related to the interaction for the entry, and wherein the determining that an entry matches an event type definition includes analyzing the information contained in the entry.

[c38]   38.   The method of claim 11 including receiving an indication of at least one exclusion definition that specifies a type of interaction, and wherein the determining of whether an entry matches one of the event type definitions is not performed if the related interaction for the entry is of a type that matches one of the exclusion definitions.

[c39]   39.   The method of claim 11 including receiving a request to provide information about occurrences of specified event types, and providing in response the stored indications of occurrences related to the specified event types.

[c40]   40.   The method of claim 11 wherein the determining of whether the interaction data entries match event type definitions is performed as a service for a customer.

[c41]   41.   A computer-readable medium whose contents cause a computing device to analyze data to identify occurrences of defined types of interactions, by performing a method comprising:

receiving an indication of data that is associated with a content set and that has at least one entry, each entry related to an interaction with the content set;

receiving an indication of multiple definitions each specifying a type of interaction with the content set and each associated with a portion of the content set; and

for each entry of the data,

determining whether the entry matches one of the definitions in such a manner that the related interaction for the entry is of the type specified by that definition and is with the portion of the content set associated with that definition; and

when it is determined that the entry matches one of the definitions, indicating an occurrence of the type of interaction specified by that definition.

[c42]   42.   The computer-readable medium of claim 41 wherein the computer-readable medium is a memory of a computer system.

[c43]   43.   The computer-readable medium of claim 41 wherein the computer-readable medium is a data transmission medium transmitting a generated data signal containing the contents.

[c44]   44.   The computer-readable medium of claim 41 wherein the contents are instructions that when executed cause the computing device to perform the method.

[c45]   45.   A computing device for analyzing interaction data to identify occurrences of defined types of events, comprising:

an interaction data receiver component capable of receiving an indication of interaction data that is associated with a content set and that has at least one entry, each entry related to an interaction with the content set;

a definition receiver component capable of receiving an indication of at least one communication definition that specifies a manner of communicating

content set interactions and of receiving an indication of multiple event type definitions each specifying a type of interaction with the content set and each associated with one of the communication definitions; and

an interaction data parsing component capable of, for each entry of the interaction data, determining whether the entry matches one of the event type definitions in such a manner that the related interaction for the entry is of the type specified by that event type definition and was communicated in the manner specified by the communication definition associated with that event type definition and, when it is determined that the entry matches one of the event type definitions, storing an indication of an occurrence of that event type.

[c46]   46.   The computing device of claim 45 wherein the interaction data receiver component, definition receiver component and interaction data parsing component are executing in memory of the computing device.

[c47]   47.   A computer system for analyzing interaction data to identify occurrences of defined types of events, comprising:

means for receiving an indication of interaction data that is associated with a content set and that has at least one entry, each entry related to an interaction with the content set;

means for receiving an indication of at least one communication definition that specifies a manner of communicating content set interactions and for receiving an indication of multiple event type definitions each specifying a type of interaction with the content set and each associated with one of the communication definitions; and

means for, for each entry of the interaction data, determining whether the entry matches one of the event type definitions in such a manner that the related interaction for the entry is of the type specified by that event type definition and was communicated in the manner specified by the communication definition associated with that event type definition and, when it is determined that

the entry matches one of the event type definitions, storing an indication of an occurrence of that event type.

[c48]   48.   A computer-implemented method for analyzing interaction data for a web site to identify occurrences of defined types of events, the method comprising:

receiving an indication of multiple interaction data entries each containing information about an interaction with a web site that includes a specified URL, each of the specified URLs optionally including a URL path portion and optionally including a query string portion, the contained information for each entry including any URL path portion that is included in the specified URL for the entry and including any query string portion that is included in the specified URL for the entry;

receiving an indication of multiple event type definitions that each specify a type of interaction, each event type definition having a URL path pattern capable of matching at least one URL path related to the interaction type and having a query string pattern capable of matching at least one query string related to the interaction type; and

for each entry,

analyzing the entry to determine whether the entry matches one of the event type definitions by containing information about an interaction of the type specified by that one event type definition, the matching such that the information contained in the entry includes a URL path portion that matches the URL path pattern specified in that one event type definition and includes a query string portion that matches the query string pattern specified in that one event type definition; and

when it is determined that the entry matches one of the event type definitions, storing an indication of an occurrence of that event type for the web site.

[c49] 49. The method of claim 48 wherein the contained information about each interaction further includes information related to a manner of identifying a web site server with which the interaction occurred, wherein each of the event type definitions is associated with a logical site definition that specifies a manner of identifying a web site server related to the web site, and wherein the determining that an entry matches an event type definition further includes determining that the information included in the entry that is related to the manner of identifying the web site server matches the manner of identifying a web site server specified by the logical site definition associated with that event type definition.

[c50] 50. The method of claim 49 wherein the manner of identifying a web site server related to the web site that is specified by each logical site definition includes using a specified IP address and port number to communicate with the web site server.

[c51] 51. The method of claim 49 wherein the manner of identifying a web site server related to the web site that is specified by each logical site definition includes using a specified group of communication parameters to communicate with the web site server.

[c52] 52. The method of claim 48 wherein each of the interactions with a web site that includes a specified URL includes a request for a web page from that web site that corresponds to the specified URL.

[c53] 53. The method of claim 48 wherein each of the interactions with a web site that includes a specified URL includes a sending to a client of a web page from that web site that corresponds to the specified URL.

[c54]   54.   The method of claim 48 wherein at least some of the event type definitions include multiple event patterns that each specify a distinct combination of a URL path pattern capable of matching at least one URL path and a query string pattern capable of matching at least one query string, and wherein an entry is determined to match an event type definition having multiple event patterns if, for any of the event patterns, the information contained in the entry includes a URL path portion that matches the URL path pattern specified in that event pattern and includes a query string portion that matches the query string pattern specified in that event pattern.

[c55]   55.   The method of claim 48 wherein the query string patterns each indicate one or more query parameter names whose presence in a query string is required, allowed, or disallowed if that query string is to match the query string pattern, and wherein the determination of whether a query string portion matches a query string pattern further includes determining if the query string portion includes each of the query parameter names whose presence is indicated in the query string pattern to be required and does not include any of the query parameter names whose presence is indicated in the query string pattern to be disallowed.

[c56]   56.   The method of claim 48 wherein the query string patterns each include at least one query string parameter name, and wherein the stored indication of an occurrence of an event type for an entry matching the definition for that event type includes, for each query string parameter name in the query string pattern for that event type definition, a value from the query string portion of the specified URL for that entry that corresponds to that query string parameter name.

[c57]   57.   The method of claim 56 wherein at least one of the query string patterns includes multiple instances of a query string parameter name, and

including, when an entry matches the definition for the event type that includes that one query string pattern in such a manner that the query string portion of the specified URL for that entry includes multiple combinations that each have a query string value corresponding to one of the instances of the query string parameter name, before the storing of those query string values, determining a unique name for each of the multiple instances of the query string parameter name so that those corresponding query string values for each of the multiple instances of the query string parameter name can be stored distinctly from the corresponding query string values for the other instances of the query string parameter name.

[c58]   58.   The method of claim 48 wherein at least some of the URL path patterns include a static portion capable of matching a single corresponding portion of a URL path and include a variable portion capable of matching multiple corresponding portions of URL paths.

[c59]   59.   The method of claim 48 wherein each of the URL path patterns can be specified to match any URL path and wherein each of the query string patterns can be specified to match any query string.

[c60]   60.   The method of claim 48 wherein at least some of the entries are determined to match multiple of the event type definitions.

[c61]   61.   The method of claim 48 including receiving an indication of at least one exclusion definition that specifies a type of interaction, and wherein the determining of whether an entry matches one of the event type definitions is not performed if the interaction for the entry is of a type that matches one of the exclusion definitions.

[c62]   62.   The method of claim 61 wherein the type of interaction specified by each of the exclusion definitions is a request for a file of a specified type.

[c63]   63.   The method of claim 61 wherein the type of interaction specified by each of the exclusion definitions is a request from a specified client computer.

[c64]   64.   The method of claim 61 wherein the type of interaction specified by each of the exclusion definitions is a request sent to a specified executable program at the web site.

[c65]   65.   The method of claim 48 including receiving a request to provide information about occurrences of specified event types, and providing in response the stored indications of occurrences related to the specified event types.

[c66]   66.   A computer-readable medium containing instructions that when executed cause a computer system to analyze data for a web site to identify occurrences of defined types of interactions related to the web site, by performing a method comprising:

receiving an indication of multiple data entries each containing information about an interaction related to a web site that includes a specified URI, each of the specified URIs optionally including a path portion and optionally including a query string portion, the contained information for each entry including any path portion that is included in the specified URI for the entry and including any query string portion that is included in the specified URI for the entry;

receiving an indication of multiple definitions that each specify a type of interaction, each definition having a path pattern capable of matching at least one URI path related to the interaction type and having a query string pattern capable of matching at least one query string related to the interaction type; and

for each entry,

analyzing the entry to determine whether the entry matches one of the definitions by containing information about an interaction of the type specified by that one definition, the matching such that the information contained in the entry includes a URI path portion that matches the path pattern specified in that one definition and includes a query string portion that matches the query string pattern specified in that one definition; and

when it is determined that the entry matches one of the definitions, indicating an occurrence of an interaction of the type specified by that one definition.

[c67]   67.   A computing device for analyzing interaction data to identify occurrences of defined types of events, comprising:

an interaction data receiver component capable of receiving an indication of multiple interaction data entries each containing information about an interaction with a web site that includes a specified URL, each of the specified URLs optionally including a URL path portion and optionally including a query string portion, the contained information for each entry including any URL path portion that is included in the specified URL for the entry and including any query string portion that is included in the specified URL for the entry;

a definition receiver component capable of receiving an indication of multiple event type definitions that each specify a type of interaction, each event type definition having a URL path pattern capable of matching at least one URL path related to the interaction type and having a query string pattern capable of matching at least one query string related to the interaction type; and

an interaction data parsing component capable of, for each entry, analyzing the entry to determine whether the entry matches one of the event type definitions by containing information about an interaction of the type specified by that one event type definition, the matching such that the information contained in the entry includes a URL path portion that matches the URL path pattern specified in that one event type definition and includes a query string portion that matches

the query string pattern specified in that one event type definition, and of storing an indication of an occurrence of an event type for the web site when it is determined that an entry matches the definition for that event type.

[c68]   68.   A computer-implemented method for analyzing interaction data for a web site to identify occurrences of defined types of events, the method comprising:

receiving an indication of multiple interaction data entries each containing information about a request that specifies a URL corresponding to a web site, each of the specified URLs optionally including a URL path portion and optionally including a query string portion, each of the query string portions including one or more combinations each having a query parameter name and corresponding query value, the contained information about each request including any URL path portion that is included in the specified URL for the request and including any query string portion that is included in the specified URL for the request;

receiving an indication of multiple event type definitions that each specify a type of interaction, each event type definition having a URL path pattern capable of matching at least one URL path related to the interaction type and a query string pattern capable of matching at least one query string related to the interaction type, each query string pattern indicating one or more query parameter names; and

for each entry,

analyzing the entry to determine whether the entry matches one of the event type definitions by containing information about an interaction of the type specified by that one event type definition, the matching such that the information contained in the entry includes a URL path portion that matches the URL path pattern specified in that one event type definition and includes a query string portion that matches the query string pattern specified in that one event type definition; and

when it is determined that the entry matches one of the event type definitions, for each of the query parameter names that is included in the query string portion of the contained information for the entry and that is indicated in the query string pattern specified by that one event type definition, storing the query value from the contained information that corresponds to the query parameter name.

[c69]   69.   The method of claim 68 wherein each of the query string patterns additionally indicates a type of value corresponding to at least some of the indicated query parameter names, and wherein the determining that an entry matches an event type definition further includes determining that, for each of the query parameter names that is included in the query string portion of the contained information for the entry and that is indicated to have a type of value in the query string pattern specified by that one event type definition, the corresponding query value in the query string portion matches the indicated value type.

[c70]   70.   The method of claim 68 wherein the contained information about each request further includes information related to a manner of identifying a web site server to which the request was sent, wherein each of the event type definitions is associated with a logical site definition that specifies a manner of identifying a web site server related to the web site, and wherein the determining that an entry matches an event type definition further includes determining that the information included in the entry that is related to the manner of identifying the web site server matches the manner of identifying a web site server specified by the logical site definition associated with that event type definition.

[c71]   71.   The method of claim 68 wherein at least one of the query string patterns includes multiple instances of a query string parameter name, and including, when an entry matches the definition for the event type that includes

that one query string pattern in such a manner that the query string portion of the specified URL for that entry includes multiple combinations that each have a query string value corresponding to one of the instances of the query string parameter name, before the storing of those query string values, determining a unique name for each of the multiple instances of the query string parameter name so that those corresponding query string values for each of the multiple instances of the query string parameter name can be stored distinctly from the corresponding query string values for the other instances of the query string parameter name.

[c72]   72.   A computer-implemented method for analyzing interaction data for a web site to identify occurrences of defined types of events, the method comprising:

receiving an indication of multiple interaction data entries each containing information about a request that specifies a URL corresponding to a web site, each of the specified URLs optionally including a URL path portion and optionally including a query string portion, each of the query string portions including one or more combinations each having a query parameter name and corresponding query value, the contained information about each request including any URL path portion that is included in the specified URL for the request and including any query string portion that is included in the specified URL for the request;

receiving an indication of multiple event type definitions that each specify a type of interaction, each event type definition having a URL path pattern capable of matching at least one URL path and a query string pattern capable of matching at least one query string, each query string pattern indicating one or more query parameter names whose presence in a query string is required, allowed, or disallowed if that query string is to match the query string pattern; and

for each entry,

analyzing the entry to determine whether the entry matches one of the event type definitions by containing information about an interaction of the type specified by that one event type definition, the matching such that the information contained in the entry

(a) includes a URL path portion that matches the URL path pattern specified in that one event type definition and

(b) includes a query string portion that includes each of the query parameter names whose presence is indicated in the query string pattern specified in that one event type definition to be required, and that does not include any of the query parameter names whose presence is indicated in the query string pattern specified in that one event type definition to be disallowed; and

when it is determined that the entry matches one of the event type definitions, storing an indication of an occurrence of that one event type for the web site.

[c73]   73.   The method of claim 72 wherein the contained information about each request further includes information related to a manner of identifying a web site server to which the request was sent, wherein each of the event type definitions is associated with a logical site definition that specifies a manner of identifying a web site server related to the web site, and wherein the determining that an entry matches an event type definition further includes determining that the information included in the entry that is related to the manner of identifying the web site server matches the manner of identifying a web site server specified by the logical site definition associated with that event type definition.

74.   A computer-implemented method for analyzing interaction data for a web site to identify occurrences of defined types of events, the method comprising:

receiving an indication of multiple interaction data entries each containing information about a request that specifies a URL corresponding to a web site, each of the specified URLs optionally including a URL path portion and optionally including a query string portion, the contained information about each request including any URL path portion that is included in the specified URL for the request and including any query string portion that is included in the specified URL for the request;

receiving an indication of multiple event type definitions that each specify a type of interaction, each event type definition including multiple event patterns that each specify a distinct combination of a URL path pattern capable of matching at least one URL path and a query string pattern capable of matching at least one query string; and

for each entry,

analyzing the entry to determine whether the entry matches one of the event type definitions by containing information about an interaction of the type specified by that one event type definition, the matching such that, for at least one of the event patterns included in that one event type definition, the information contained in the entry includes a URL path portion and a query string portion that match the URL path pattern and the query string pattern specified in that event pattern; and

when it is determined that the entry matches one of the event type definitions, storing an indication of an occurrence of that event type for the web site.

75.   The method of claim 74 wherein the contained information about each request further includes information related to a manner of identifying a web site server to which the request was sent, wherein each of the event type

definitions is associated with a logical site definition that specifies a manner of identifying a web site server related to the web site, and wherein the determining that an entry matches an event type definition further includes determining that the information included in the entry that is related to the manner of identifying the web site server matches the manner of identifying a web site server specified by the logical site definition associated with that event type definition.

[c76]   76.   A computer-implemented method for analyzing interaction data related to a requested URL to identify occurrences of defined types of events, the method comprising:

receiving an indication of stored information about a request for a specified URL having a URL path portion and a query string portion, the query string portion including one or more combinations each having a query parameter name and corresponding query value, the stored information including the URL path portion and the query string portion;

receiving an indication of an event type definition that specifies a type of interaction and that includes multiple event patterns each specifying a distinct combination of a URL path pattern capable of matching at least one URL path and a query string pattern capable of matching at least one query string, the query string pattern indicating one or more query parameter names whose presence in a query string is required, allowed, or disallowed if that query string is to match the query string pattern;

analyzing the stored information to determine whether the information is about an interaction of the type specified by any of the event patterns such that the URL path portion matches the URL path pattern specified in that event pattern, such that the query string portion includes each of the query parameter names whose presence is indicated in the query string pattern specified in that event pattern to be required, and such that the query string portion does not include any of the query parameter names whose presence is

indicated in the query string pattern specified in that event pattern to be disallowed; and

when it is determined that the stored information is about an interaction of the type specified by one of the event patterns, for each of the query parameter names that is included in the query string portion and that is indicated in the query string pattern specified by that one event pattern, storing the query value that corresponds to the query parameter name.

[c77]   77.   The method of claim 76 wherein the contained information about each request further includes information related to a manner of identifying a web site server to which the request was sent, wherein each of the event type definitions is associated with a logical site definition. that specifies a manner of identifying a web site server related to the web site, and wherein the determining that an entry matches an event type definition further includes determining that the information included in the entry that is related to the manner of identifying the web site server matches the manner of identifying a web site server specified by the logical site definition associated with that event type definition.

[c78]   78.   A computer-implemented method for analyzing usage data to identify occurrences of defined types of uses, the method comprising:

receiving an indication of usage data associated with a provided service or an executing computer program, the usage data having multiple entries each related to a distinct use of the provided service or executing computer program that includes information being communicated;

receiving an indication of multiple definitions each specifying a type of use and each associated with a manner of communicating information to the provided service or to the executing computer program;

for each entry of the usage data,

determining whether the entry matches one of the definitions such that the related use for the entry is of the type specified by that definition and

such that the information communicated for the related use is communicated in the manner associated with that definition; and

when it is determined that the entry matches one of the definitions, storing an indication of an occurrence of the type of use specified by that one definition.

[c79]   79.   A computer-readable medium containing a data structure that stores multiple definitions for event types so that occurrences of those event types in interaction data for a web site can be identified, the data structure having multiple entries each corresponding to an event type definition that specifies a type of interaction, each entry storing a URL path pattern capable of matching at least one URL path related to that type of interaction and a query string pattern capable of matching at least one query string related to that type of interaction,

such that when analyzing information about an interaction with a web page of the web site having a specified URL that optionally includes a URL path portion and optionally includes a query string portion, if the web page is determined to be of the type specified by an event type definition then an occurrence of that event type is indicated, the web page determined to be of the type for an event type definition if the specified URL includes a URL path portion that matches the URL path pattern specified for that event type definition and includes a query string portion that matches the query string pattern specified for that event type definition.

[c80]   80.   The computer-readable medium of claim 79 wherein each of the entries further includes an indication of a logical site definition that specifies a manner of identifying a web site server related to the web site,

such that, when the information about the interaction further includes information related to a manner of identifying a web site server with which the interaction occurred, the web page is determined to be of the type specified by an event type definition only if the information related to the manner of identifying the

web site server matches the manner of identifying a web site server specified by the logical site definition indicated by that event type definition.

[c81]   81.   The computer-readable medium of claim 79 wherein the event type definitions corresponding to at least some of the entries each have multiple distinct combinations of a URL path pattern and a query string pattern, the entry for each of those event type definitions further storing the multiple combinations of URL path patterns and query string patterns of the event patterns for that event type definition,

such that the web page is determined to be of the type specified by an event type definition having multiple combinations if, for any of those combinations, the information includes a URL path portion that matches the URL path pattern specified in that combination and includes a query string portion that matches the query string pattern specified in that combination.

[c82]   82.   The computer-readable medium of claim 79 wherein the stored query string patterns each indicate one or more query parameter names whose presence in a query string is required, allowed, or disallowed if that query string is to match the query string pattern,

such that a query string portion of the information is determined to match the query string pattern specified for one of the event type definitions if the query string portion includes each of the query parameter names whose presence is indicated in that query string pattern to be required and does not include any of the query parameter names whose presence is indicated in that query string pattern to be disallowed.

[c83]   83.   The computer-readable medium of claim 79 wherein the stored URL path patterns each include a static portion capable of matching a single corresponding portion of a URL path and include a variable portion capable of matching multiple corresponding portions of URL paths.

[c84]   84.   The computer-readable medium of claim 79 further containing a data structure having multiple entries that each store an exclusion definition that specifies a type of interaction,

such that if the information being analyzed is of a type matching one of the exclusion definitions, the information will not be determined to match any of the event type definitions.

[c85]   85.   A computer-readable medium containing a data structure storing multiple definitions for event types so that occurrences of those event types can be identified in interaction data or usage data, the data structure having multiple entries each corresponding to an event type definition, each entry specifying a type of interaction and including an indication of a communication definition that specifies a manner of communicating information related to interactions or uses,

so that when analyzing data about an interaction or use that indicates a manner in which related information was communicated, if the data matches one of the event type definitions in such a manner that the interaction or use is of the type specified by that event type definition and had related information that was communicated in the manner specified by the communication definition indicated by that event type definition, an occurrence of that event type can be identified.

[c86]   86.   A method for analyzing customer data to identify occurrences of defined types of events, the method comprising:

receiving a request from a customer to analyze interaction or usage data for that customer;

receiving an indication of analysis definitions for the customer that include at least one communication definition specifying a manner of communicating information and include multiple event type definitions each specifying a type of interaction or use and each associated with one of the communication definitions;

receiving a first set of data for the customer that includes information about at least one interaction or use;

analyzing the received set of data to determine whether the received data includes information about any interactions or uses that match one of the event type definitions in such a manner that the interaction or use is of the type specified by that event type definition and had related information communicated in the manner specified by the communication definition associated with that event type definition; and

when it is determined that the received data matches one of the event type definitions, providing information to the customer about an occurrence of that event type.

[c87]   87.   The method of claim 86 wherein sets of data are automatically retrieved from the customer and analyzed on a periodic basis.

[c88]   88.   The method of claim 86 wherein the providing of the information to the customer includes generating reports on a periodic basis and sending the generated reports to the customer.

[c89]   89.   The method of claim 86 including storing an indication of the occurrence of that event type, and wherein the providing of the information to the customer includes receiving a request from the customer at a remote location to provide information about occurrences of event types and sending the requested information to the remote location.

[c90]   90.   The method of claim 86 wherein the method is performed for multiple customers each having distinct interaction or usage data and having distinct analysis definitions.

[c91]   91.   A method for creating definitions of event types for analyzing interaction data for a web site to identify occurrences of those defined event types, the method comprising:

receiving an indication of a log file for the web site or of other information related to the web site that indicates multiple interactions with a web site server for the web site, each indicated interaction having associated information including network address information for the web site server and a URL specified as part of the interaction;

analyzing the log file or the other information to identify distinct network addresses for the web site servers for the web site, and generating a site definition for each of the identified network addresses that includes that network address; and

analyzing the log file or the other information to identify distinct types of interactions with the web site of interest, and generating an event type definition for each of the identified interaction types,

so that information about an interaction with the web site can be analyzed to determine whether the information matches one of the event type definitions in such a manner that the interaction is of the type specified by that event type definition and was with a web site server having a network address that matches one of the site definitions.

[c92]   92.   The method of claim 91 wherein the specified URLs each optionally include a URL path portion and optionally include a query string portion, and wherein the event type definitions are each generated to include a URL path pattern capable of matching at least one URL path related to the interaction type and a query string pattern capable of matching at least one query string related to the interaction type.

[c93]   93.   The method of claim 91 wherein each of the event type definitions are further generated to include an indication to one of the generated site

definitions, such that information about an interaction with the web site is not determined to match one of the event type definitions unless the interaction was with the web site server having the network address included in the site definition indicated by that one event type definition.

[c94]   94.   The method of claim 91 including analyzing information about an interaction with the web site using the generated event type definitions and site definitions.